

Hydrologic Soil Groups

General

The Hydrologic Soil Group, designated A, B, C or D, is a group of soils that, when saturated, have the same runoff potential under similar storm and cover conditions. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to seasonally high water table, intake rate, permeability after prolonged wetting, and depth to very slowly permeable layer. The influences of ground cover and slope are treated independently --- not in hydrologic soil groups.

In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by surface conditions.

Transmission rate is the rate at which water moves in the soil and is controlled by properties of the soil layers.

Hydrologic Soil Group A

Soils having high infiltration rates even when thoroughly wetted and consisting chiefly of deep, well-drained to excessively drained sands or gravels. These soils have a high rate of water transmission. (Low runoff potential)

Hydrologic Soil Group B

Soils having moderate infiltration rates when thoroughly wetted, consisting chiefly of moderately deep or deep, moderately well or well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission.

Hydrologic Soil Group C

Soils having slow infiltration rates when thoroughly wetted, consisting chiefly of (1) soils with a layer that impedes the downward movement of water, or (2) soils with moderately fine or fine textures and slow infiltration rate. These soils have a slow rate of water transmission.

Hydrologic Soil Group D

Soils having very slow infiltration rates when thoroughly wetted, consisting chiefly of (1) clayey soils with high swelling capacity or potential, (2) soils with a high permanent water table, (3) soils with a claypan or clay layer at or near the surface, and (4) shallow soils over nearly impervious materials. These soils have a very slow rate of water transmission. (High runoff potential)

Hydrologic Soil Groups, (cont.)

Dual Hydrologic Groups

Dual hydrologic groups, A/D, B/D and C/D, are given for criteria with soils that can be adequately drained. The first letter applies to the drained condition and the second to the undrained condition. Only soils that are rated D in their natural condition are assigned to dual groups.

The hydrologic soil groups are listed in the table "Water Features" in Section II-(iii)-J